

[illegible]

FIG. 1

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graph TD
    A[Whole drupes 1 e.g. olives] --> B[Washing]
    B --> C[Preheating]
    D[Microwaves] --> C
    C --> E[/Refiner Low pressure/]
    E --> F[Aromatic vapors 60]
    F --> G[Concentration 70]
    G --> H[Concentrated aqueous flavors 88]
    E --> I[Expanded vapor]
    E --> J[Refined pulp 3 100]
    E --> K[Screening residue 2-4 110]
    E --> L[Wood fired boiler]
    J --> M[Phase separation 160]
    M --> N[Pulp oil PO]
    M --> O[Water]
    M --> P[Dried paste PT 170]
    N --> Q[Clarification]
    Q --> R[Clarified pulp oil]
    O --> S[AP]
    P --> T[Removal of bitterness 172]
    T --> U[Pasteurization]
    U --> V[Drying]
    V --> W[Final paste PDPC]
    L --> V
    L --> X[Dehusking 128]
    K --> Y[Separation 120]
    Y --> Z[Skins 2 122]
    Y --> AA[Stones 4 123]
    Z --> X
    AA --> X
    X --> AB[Shell 5 126]
    X --> AC[Kernel 6 130]
    AC --> AD[Pressing 132]
    AD --> AE[Press cake 134-174]
    AD --> AF[Kernel oil KO]
    AE --> AG[AP]
    AE --> AH[Press cake with bitterness removed DDPC]
    V -.-> I
    I -.-> L
```

The flowchart illustrates the process for producing refined olive oil and various olive products from whole drupes (e.g., olives). The process begins with **Whole drupes (1)** (e.g., olives), which are **Washed** and then **Preheated**. **Microwaves** are used for preheating. The preheated drupes are then processed in a **Refiner Low pressure**. The refiner produces **Aromatic vapors (60)**, which are **Concentrated (70)** to yield **Concentrated aqueous flavors (88)**. The refiner also produces **Expanded vapor** and **Refined pulp (3) (100)**. The **Refined pulp (3)** undergoes **Phase separation (160)**, resulting in **Pulp oil (PO)**, **Water**, and **Dried paste (PT) (170)**. The **Pulp oil (PO)** is **Clarified** to produce **Clarified pulp oil**. The **Water** is used to produce **AP**. The **Dried paste (PT) (170)** undergoes **Removal of bitterness (172)**, followed by **Pasteurization** and **Drying** to produce **Final paste (PDPC)**. The **Refiner Low pressure** also produces **Screening residue (2-4) (110)**, which is **Separated (120)** into **Skins (2) (122)** and **Stones (4) (123)**. The **Skins (2) (122)** and **Stones (4) (123)** are **Dehusked (128)** to produce **Shell (5) (126)** and **Kernel (6) (130)**. The **Kernel (6) (130)** is **Pressed (132)** to produce **Press cake (134-174)** and **Kernel oil (KO)**. The **Press cake (134-174)** is further processed to produce **AP** and **Press cake with bitterness removed (DDPC)**. The **Expanded vapor** from the refiner is used in a **Wood fired boiler**, which provides heat for the **Drying** step and the **Dehusking (128)** step.

- PDPC

FIG. 2

